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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/624,699	07/22/2003	Iain Robertson	TI-32313	7070
23494	7590	10/31/2006	EXAMINER	
TEXAS INSTRUMENTS INCORPORATED P O BOX 655474, M/S 3999 DALLAS, TX 75265			TRAN, KHAI	
			ART UNIT	PAPER NUMBER
			2611	

DATE MAILED: 10/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/624,699	Applicant(s) ROBERTSON ET AL.	
	Examiner KHAI TRAN	Art Unit 2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,5-7,19 and 23-25 is/are rejected.
- 7) ☒ Claim(s) 2-4,8-18,20-22 and 26-28 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>8/2/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. Figures 1-5 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. Claims 5-7, 23-25 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 5, line 4, the term "the phase of ~~the~~ or a master one" is not clear.

Claims 6-7 are rejected by virtue of their dependency.

Regarding claim 23, line 3, the term "to a, or the" is not clear.

Claims 24-25 are rejected by virtue of their dependency.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Kikuchi et al (U.S. Pat. 6,018,305).

Regarding claim 1, Kikuchi et al disclose a circuit as shown in Figures 1-2, comprising: a plurality of data input terminals each for receiving respective serial data signals having the same bit rate (s serial to parallel converters 57, 57(1) to 57(m), receiving serial data signals); bit clock generating means (clock signal CLK1) responsive bit clock signal aligned to provide for each a respective bit clock signal aligned with that data signal (from serial DATA input SD) and having a period equal to twice the bit period of the data signal; bit clock phase adjustment means responsive to the relative phases of the bit clocks to adjust the phases of the bit clocks relative to one another so that they all lie within a common interval of 180° of phase, where 360° of phase represents the period of the bit clock (see abstract, The serial to parallel conversion apparatus includes a first divider for dividing a first clock signal into 2 to produce a second clock signal and adjusting the phase of the second signal in accordance with a first phase adjustment signal, a first serial to parallel converter for converting serial data into parallel data of 2 bits in response to the second clock signal, a pair of shift registers for receiving and storing the different bits of the parallel data and successively shifting the stored bits in response to the second clock signal, a second divider for dividing the second clock signal into 4 to produce a third clock signal, a second detector for producing the first phase adjustment signal and the second phase

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adjustment signal based on the stored data of the **shift registers**, and a pair of second serial to parallel converters for receiving the different bits of the parallel data and each producing first parallel data of 4 bits in response to the third clock signal).

Claim 19 is similar to claim 1. Therefore, claim 19 is rejected under a similar rationale.

Allowable Subject Matter

5. Claims 2-4, 8-18, 20-22, 26-28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. Claims 5-7, 23-25 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter: Kikuchi et al fail to disclose a circuit and method for receiving a plurality of parallel data signals of the same bit rate comprising: wherein the plurality of bit clocks comprise a master one, the others of the plurality being slave ones, and the bit clock phase adjustment means is arranged to compare the master bit clock signal with the phase of the other or each of the other, slave, bit clock signals and to adjust the phase of the or each slave bit clock signal if it falls outside the common interval of 180° of phase as recited claims 2-20; wherein the phase adjustment means is arranged to adjust the phase of a bit clock signal that is outside the common interval to a phase that

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is defined with respect to the phase of the or a master one of the bit clock signals and that is within the common interval as recited in claims 5, 23.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Pickering et al (U.S. Pat. 7,035,368) disclose a high speed parallel link receiver.

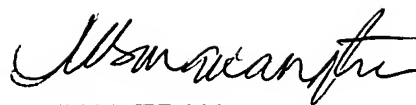
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KHAIR TRAN whose telephone number is (571) 272-3019. The examiner can normally be reached on 7:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JAY PATEL can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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A handwritten signature in black ink, appearing to read 'Khai Tran', written in a cursive style.

KHAI TRAN
Primary Examiner
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KT
October 27, 2006